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Pro	Pro	Pro	Leu	Ile	Ser	Ser	Ala	Lys	His	Pro	Ser	Val	Leu	Glu	Arg	
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Gln	Ile	Gly	Ala	Ile	Ser	Gln	Gly	Met	Ser	Val	Gln	Leu	His	Val	Pro	
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Gly Val Pro Thr Ala Gln Glu Ala Ser Val Leu Arg Gly Thr Ala Leu	
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Gly Ser Val Pro Gly Gly Ser Ile Thr Lys Gly Ile Pro Ser Thr Arg	
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Val Pro Ser Asp Ser Ala Ile Thr Tyr Arg Gly Ser Ile Thr His Gly	
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Lys Gly His Val Ile Tyr Glu Gly Lys Lys Gly His Val Leu Ser Tyr	
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Glu Gly Gly Met Ser Val Thr Gln Cys Ser Lys Glu Asp Gly Arg Ser	
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Ser Ser Gly Pro Pro His Glu Thr Ala Ala Pro Lys Arg Thr Tyr Asp	
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Thr	His	Thr 35	Asp	Val	Gly	Leu	Leu 40	Glu	Tyr	Gln	His	His 45	Ser	Arg	Asp
Tyr	Ala 50	Ser	His	Leu	Ser	Pro 55	Gly	Ser	Ile	Ile 60	Gln	Pro	Gln	Arg	Arg
Arg 65	Pro	Ser	Leu	Leu	Ser 70	Glu	Phe	Gln	Pro	Gly 75	Asn	Glu	Arg	Ser	Gln
Glu	Leu	His	Leu 85	Arg	Pro	Glu	Ser	His 90	Ser	Tyr	Leu	Pro	Glu	Leu 95	Gly
Lys	Ser	Glu	Met 100	Glu	Phe	Ile	Glu	Ser 105	Lys	Arg	Pro	Arg	Leu 110	Glu	Leu
Leu	Pro	Asp 115	Pro	Leu	Leu	Arg	Pro 120	Ser	Pro	Leu	Leu	Ala 125	Thr	Gly	Gln
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Glu	Leu	Val	Pro 165	Pro	Arg	Leu	Ser	Lys 170	Glu	Glu	Leu	Ile	Gln	Asn 175	Met
Asp	Arg	Val 180	Asp	Arg	Glu	Ile	Thr 185	Met	Val	Glu	Gln	Gln 190	Ile	Ser	Lys
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Pro Leu Lys Val Glu Glu Ala Gly Ser Lys Ala Ala Val Thr Lys Gly	
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Ser Ser Ser Gly Ala Thr Gln Asp Ser Asp Phe Ser Ala Thr Cys Ser	
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Ala Asp Glu Val Asp Glu Pro Glu Gly Gly Asp Lys Gly Arg Leu Leu	
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Ser Pro Arg Pro Ser Leu Leu Thr Pro Ala Gly Asp Pro Arg Ala Ser	
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Thr Ser Pro Gln Lys Pro Leu Asp Leu Lys Gln Leu Lys Gln Arg Ala	
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Ala Ala Ile Pro Pro Ile Gln Val Thr Lys Val His Glu Pro Pro Arg	
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Glu Asp Thr Val Pro Pro Lys Pro Val Pro Pro Val Pro Pro Pro Thr	
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Gln His Leu Gln Pro Glu Gly Asp Val Ser Gln Gln Ser Gly Gly Ser	
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Pro	Arg	Gly	Lys	Ser	Arg	Ser	Pro	Val	Pro	Pro	Ala	Glu	Lys	Glu	Ala	
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Glu	Lys	Pro	Ala	Phe	Phe	Pro	Ala	Phe	Pro	Thr	Glu	Gly	Pro	Lys	Leu	
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Pro	Thr	Glu	Pro	Pro	Arg	Trp	Ser	Ser	Gly	Leu	Pro	Phe	Pro	Ile	Pro	
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Pro	Arg	Glu	Val	Ile	Lys	Thr	Ser	Pro	His	Ala	Ala	Asp	Pro	Ser	Ala	
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Phe	Ser	Tyr	Thr	Pro	Pro	Gly	His	Pro	Leu	Pro	Leu	Gly	Leu	His	Asp	
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Ser	Ala	Arg	Pro	Val	Leu	Pro	Arg	Pro	Pro	Ile	Ser	Asn	Pro	Pro	Pro	
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Leu	Ile	Ser	Ser	Ala	Lys	His	Pro	Gly	Val	Leu	Glu	Arg	Gln	Leu	Gly	
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Ala	Ile	Ser	Gln	Gln	Gly	Met	Ser	Val	Gln	Leu	Arg	Val	Pro	His	Ser	
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Glu	His	Ala	Lys	Ala	Pro	Met	Gly	Pro	Leu	Thr	Met	Gly	Leu	Pro	Leu	
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Val Ala Thr Val Lys Glu Ala Gly Arg Ser Ile His Glu Ile Pro Arg	
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Glu Ile Ala Lys Ser Pro His Ser Thr Val Pro Glu His His Pro His	
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Arg Gly Ile Pro Leu Glu Ala Ala Ala Ala Tyr Tyr Leu Pro Arg	
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His Leu Ala Pro Ser Pro Thr Tyr Pro His Leu Tyr Pro Pro Tyr Leu	
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Ile Asn Asp Tyr Ile Thr Ser Gln Gln Met His His Asn Ala Ala Ser	
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 Lys Pro Asp Ile Glu Phe Thr Glu Ser Lys Arg Pro Arg Leu Glu Leu  
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 Tyr Asn Gln Pro Ser Asp Thr Arg Gln Tyr His Glu Asn Ile Lys Ile  
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 Asn Gln Ala Met Arg Lys Lys Leu Ile Leu Tyr Phe Lys Arg Arg Asn  
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000100:ES22560



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gca Ala 400	aag Lys	aaa Lys	ggc Gly	ctc Leu	ctg Leu 405	gaa Glu	cat His	ggg Gly	agg Arg	aac Asn 410	tgg Trp	tca Ser	gcc Ala	att Ile	gcc Ala 415	1607
cgc Arg	atg Met	gtg Val	ggc Gly 420	tcc Ser	aag Lys	acc Thr	gtg Val	tcc Ser	cag Gln 425	tgt Cys	aag Lys	aac Asn	ttc Phe	tac Tyr 430	ttc Phe	1655
aac Asn	tac Tyr	aag Lys	aag Lys 435	agg Arg	cag Gln	aac Asn	ctg Leu 440	gac Asp	gaa Glu	atc Ile	ctt Leu	cag Gln 445	cag Gln	cac His	aag Lys	1703
cta Leu	aag Lys	atg Met 450	gag Glu	aag Lys	gag Glu	agg Arg	aac Asn 455	gct Ala	cgg Arg	agg Arg	aag Lys	aag Lys 460	aag Lys	aag Lys	acc Thr	1751
cca Pro	gct Ala 465	gcg Ala	gcg Ala	agc Ser	gag Glu	gag Glu 470	aca Thr	gcc Ala	ttc Phe	cca Pro	cct Pro 475	gcc Ala	gct Ala	gag Glu	gac Asp	1799
gaa Glu 480	gag Glu	atg Met	gaa Glu	gca Ala	tca Ser 485	ggc Gly	gca Ala	agt Ser	gcc Ala 490	aat Asn	gag Glu	gaa Glu	gag Glu	ctg Leu	gcg Ala 495	1847
gag Glu	gag Glu	gca Ala	gaa Glu	gcc Ala 500	tca Ser	cag Gln	gcc Ala	tct Ser	ggg Gly 505	aat Asn	gag Glu	gtt Val	ccc Pro	aga Arg	gtt Val 510	1895

ggg Gly	gag Glu	tgc Cys	agt Ser 515	ggc Gly	cca Pro	gct Ala	gct Ala	gtc Val 520	aac Asn	aac Asn	agc Ser	tct Ser	gat Asp 525	act Thr	gag Glu	1943
agt Ser	gtc Val	cca Pro 530	tcc Ser	ccg Pro	cgt Arg	tca Ser	gaa Glu 535	gcc Ala	acg Thr	aag Lys	gac Asp	act Thr 540	ggg Gly	cct Pro	aaa Lys	1991
ccc Pro	act Thr 545	ggc Gly	act Thr	gaa Glu	gca Ala	ttg Leu 550	ccc Pro	gct Ala	gcc Ala	acc Thr	cag Gln 555	cca Pro	cct Pro	gtt Val	cct Pro	2039
cct Pro 560	cca Pro	gaa Glu	gaa Glu	ccg Pro	gca Ala 565	gta Val	gcc Ala	cct Pro	gct Ala	gag Glu 570	ccc Pro	tcc Ser	cca Pro	gtc Val	cct Pro 575	2087
gat Asp	gcc Ala	agt Ser	ggc Gly 580	cca Pro	cca Pro	tcc Ser	cca Pro	gag Glu 585	cct Pro	tcc Ser	cat His	cac His	ctg Leu	ccg Pro 590	cac His	2135
ccc Pro	cgg Arg	cta Leu	ctg Leu 595	tgg Trp	aca Thr	agg Arg	atg Met	aac Asn 600	aag Lys	aag Lys	ccc Pro	cgg Arg	ctg Leu 605	ctc Leu	cag Gln	2183
ctc Leu	ccc Pro	aga Arg 610	cag Gln	agg Arg	atg Met	cca Pro	agg Arg 615	agc Ser	aga Arg	agt Ser	ctg Leu 620	agg Arg	ccg Pro	agg Arg	aga Arg	2231
tcg Ser	atg Met 625	tgg Trp	gaa Glu	aag Lys	cca Pro	gag Glu 630	gag Glu	ccc Pro	gag Glu	gct Ala	tct Ser 635	gag Glu	aag Lys	ccc Pro	ccg Pro	2279
aag Lys 640	agt Ser	gta Val	aag Lys	agt Ser	gac Asp 645	cac His	aag Lys	aag Lys	gag Glu	acc Thr 650	gag Glu	gaa Glu	gag Glu	cct Pro	gaa Glu 655	2327
gac Asp	aaa Lys	gcc Ala	aag Lys 660	ggc Gly	aca Thr	gag Glu	gcc Ala	att Ile	gaa Glu 665	act Thr	gtg Val	tct Ser	gag Glu	gca Ala 670	cca Pro	2375
ctt Leu	aag Lys	gtg Val	gag Glu 675	aag Lys	gct Ala	ggt Gly	agc Ser	aag Lys 680	gca Ala	gct Ala	gtg Val	acc Thr	aag Lys 685	ggt Gly	tcc Ser	2423
agc Ser	tca Ser	ggc Gly 690	gcc Ala	acc Thr	cag Gln	gac Asp	agt Ser 695	gac Asp	tcc Ser	agt Ser	gcc Ala	acc Thr 700	tgc Cys	agt Ser	gcc Ala	2471
gat Asp	gag Glu 705	gtg Val	gac Asp	gaa Glu	ccc Pro	gaa Glu 710	gga Gly	ggt Gly	gac Asp	aag Lys	ggc Gly 715	agg Arg	ctg Leu	ctg Leu	tca Ser	2519
cca Pro 720	agg Arg	ccc Pro	agc Ser	ctc Leu	ctc Leu 725	acc Thr	ccg Pro	gct Ala	gga Gly	gat Asp 730	ccc Pro	cgg Arg	gcc Ala	agt Ser	acc Thr 735	2567
tcg Ser	ccc Pro	cag Gln	aag Lys	ccg Pro 740	ctg Leu	gac Asp	ctg Leu	aag Lys	cag Gln 745	ctg Leu	aag Lys	cag Gln	cga Arg	gca Ala 750	gcc Ala	2615



gcc Ala	atc Ile	ccc Pro	cct Pro	atc Ile	gtc Val	acc Thr	aag Lys	gtc Val	cat His	gag Glu	ccc Pro	ccc Pro	cgg Arg	gag Glu	gac Asp	2663
755760765																
aca Thr	gta Val	ccc Pro	cca Pro	aag Lys	cca Pro	gtt Val	ccc Pro	cct Pro	gtg Val	cct Pro	cca Pro	ccc Pro	acg Thr	cag Gln	cac His	2711
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cta Leu	cag Gln	cca Pro	gag Glu	ggg Gly	gac Asp	gtg Val	tct Ser	cag Gln	cag Gln	tcg Ser	gga Gly	gga Gly	agt Ser	cca Pro	cgt Arg	2759
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ggc Gly	aag Lys	tcc Ser	cgc Arg	agc Ser	cca Pro	gtg Val	cct Pro	cct Pro	gcc Ala	gag Glu	aaa Lys	gag Glu	gca Ala	gag Glu	aaa Lys	2807
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ccc Pro	gca Ala	ttc Phe	ttt Phe	ccg Pro	gct Ala	ttc Phe	cca Pro	act Thr	gag Glu	ggc Gly	cca Pro	aag Lys	cta Leu	ccg Pro	act Thr	2855
820825830																
gag Glu	ccc Pro	cca Pro	cgc Arg	tgg Trp	tca Ser	tcg Ser	ggc Gly	ctg Leu	ccc Pro	ttc Phe	ccc Pro	atc Ile	cct Pro	cca Pro	cgg Arg	2903
835840845																
gag Glu	gtg Val	atc Ile	aag Lys	act Thr	tcc Ser	cca Pro	cac His	gcc Ala	gct Ala	gac Asp	ccc Pro	tct Ser	gcc Ala	ttc Phe	tcc Ser	2951
850855860																
tac Tyr	aca Thr	ccc Pro	ccc Pro	ggg Gly	cac His	ccg Pro	ctg Leu	cct Pro	ctg Leu	ggc Gly	ctc Leu	cac His	gat Asp	agt Ser	gcc Ala	2999
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cgg Arg	ccc Pro	gtc Val	ctg Leu	cca Pro	cgt Arg	ccc Pro	ccc Pro	atc Ile	tct Ser	aac Asn	ccc Pro	cca Pro	ccc Pro	ctc Leu	atc Ile	3047
880885890895																
tcc Ser	tct Ser	gcc Ala	aag Lys	cat His	ccc Pro	ggc Gly	gta Val	ctt Leu	gag Glu	agg Arg	cag Gln	ctg Leu	ggg Gly	gcc Ala	atc Ile	3095
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tcc Ser	cag Gln	cag Gln	ggg Gly	atg Met	tca Ser	gtc Val	cag Gln	ctt Leu	cgt Arg	gtg Val	cct Pro	cac His	tca Ser	gag Glu	cat His	3143
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gcc Ala	aag Lys	gcc Ala	ccc Pro	atg Met	ggc Gly	cct Pro	ctc Leu	acc Thr	atg Met	ggg Gly	ctg Leu	ccc Pro	ctt Leu	gcc Ala	gtg Val	3191
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gac Asp	cct Pro	aag Lys	aag Lys	ctg Leu	ggg Gly	aca Thr	gca Ala	ctg Leu	ggc Gly	tcc Ser	gcc Ala	acc Thr	agt Ser	gga Gly	agc Ser	3239
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atc Ile	acc Thr	aag Lys	ggc Gly	ctc Leu	ccc Pro	agt Ser	acc Thr	cgg Arg	gct Ala	gca Ala	gac Asp	ggc Gly	ccc Pro	agc Ser	tac Tyr	3287
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aga Arg	ggc Gly	tct Ser	atc Ile	acc Thr	cac His	ggc Gly	acg Thr	ccc Pro	gca Ala	gac Asp	gtc Val	ctc Leu	tac Tyr	aag Lys	ggg Gly	3335
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acc atc agc agg atc gtc ggt gag gac agc cca agt cgc ctt gac cgg	3383
Thr Ile Ser Arg Ile Val Gly Glu Asp Ser Pro Ser Arg Leu Asp Arg	
995 1000 1005	
gca cga gag gac acc ctg ccc aag ggc cat gtc atc tat gag ggc aag	3431
Ala Arg Glu Asp Thr Leu Pro Lys Gly His Val Ile Tyr Glu Gly Lys	
1010 1015 1020	
aaa ggc cac gtc cta tcc tat gaa ggt ggt atg tcc gtg tca cag tgc	3479
Lys Gly His Val Leu Ser Tyr Glu Gly Gly Met Ser Val Ser Gln Cys	
1025 1030 1035	
tct aag gag gat gga agg agc agc tcg ggc cca ccc cat gag act gcc	3527
Ser Lys Glu Asp Gly Arg Ser Ser Ser Gly Pro Pro His Glu Thr Ala	
1040 1045 1050 1055	
gcc cct aaa cgc acc tat gac atg atg gag ggc cgt gta ggc agg act	3575
Ala Pro Lys Arg Thr Tyr Asp Met Met Glu Gly Arg Val Gly Arg Thr	
1060 1065 1070	
gtc acc tca gcc agc ata gag gga ctc atg ggc cgc gcc atc cct gag	3623
Val Thr Ser Ala Ser Ile Glu Gly Leu Met Gly Arg Ala Ile Pro Glu	
1075 1080 1085	
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Gln His Ser Pro His Leu Lys Glu Gln His His Ile Arg Gly Ser Ile	
1090 1095 1100	
acg caa ggc atc ccg agg tcc tat gtg gag gcg cag gag gac tac tta	3719
Thr Gln Gly Ile Pro Arg Ser Tyr Val Glu Ala Gln Glu Asp Tyr Leu	
1105 1110 1115	
cgg cgg gag gcc aag ctc ttg aag cga gaa ggg aca cca cca ccc cca	3767
Arg Arg Glu Ala Lys Leu Leu Lys Arg Glu Gly Thr Pro Pro Pro Pro	
1120 1125 1130 1135	
cca cca cct cgg gac ctg act gag acc tac aag ccc cgg ccc ctg gac	3815
Pro Pro Pro Arg Asp Leu Thr Glu Thr Tyr Lys Pro Arg Pro Leu Asp	
1140 1145 1150	
cct ctg ggt ccc ctg aag ctg aag ccg act cac gag ggt gtg gta gca	3863
Pro Leu Gly Pro Leu Lys Leu Lys Pro Thr His Glu Gly Val Val Ala	
1155 1160 1165	
act gtg aag gag gcg ggc cgc tct atc cat gag atc ccg aga gag gag	3911
Thr Val Lys Glu Ala Gly Arg Ser Ile His Glu Ile Pro Arg Glu Glu	
1170 1175 1180	
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Leu Arg Arg Thr Pro Glu Leu Pro Leu Ala Pro Arg Pro Leu Lys Glu	
1185 1190 1195	
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Gly Ser Ile Thr Gln Gly Thr Pro Leu Lys Tyr Asp Ser Gly Ala Pro	
1200 1205 1210 1215	
tcc act ggc acc aag aaa cac gac gtg cgc tcc atc atc ggc agc ccc	4055
Ser Thr Gly Thr Lys Lys His Asp Val Arg Ser Ile Ile Gly Ser Pro	
1220 1225 1230	

ggc cgg cct ttc cct gcc ctg cac ccg ctg gac ata atg gct gac gcc Gly Arg Pro Phe Pro Ala Leu His Pro Leu Asp Ile Met Ala Asp Ala 1235 1240 1245	4103
cgg gca ctg gag cgt gcc tgc tat gaa gag agt ctg aag agc cgg tca Arg Ala Leu Glu Arg Ala Cys Tyr Glu Glu Ser Leu Lys Ser Arg Ser 1250 1255 1260	4151
ggg acc agc agt ggt gca ggg ggc tcc atc aca cgt ggg gct cca gtc Gly Thr Ser Ser Gly Ala Gly Gly Ser Ile Thr Arg Gly Ala Pro Val 1265 1270 1275	4199
gtc gtg cct gaa ctg ggc aag cca cgg caa agc cca ctg act tac gaa Val Val Pro Glu Leu Gly Lys Pro Arg Gln Ser Pro Leu Thr Tyr Glu 1280 1285 1290 1295	4247
gac cac ggg gca ccc ttc acc agt cac ctg cca cgt ggc tcc cct gtg Asp His Gly Ala Pro Phe Thr Ser His Leu Pro Arg Gly Ser Pro Val 1300 1305 1310	4295
acc acg agg gag ccc acg cca cgc ctt cag gaa ggc agc ctc cta tcc Thr Thr Arg Glu Pro Thr Pro Arg Leu Gln Glu Gly Ser Leu Leu Ser 1315 1320 1325	4343
agc aag gcg tcc cag gac cgg aag ctg aca tct aca ccc cgg gag atc Ser Lys Ala Ser Gln Asp Arg Lys Leu Thr Ser Thr Pro Arg Glu Ile 1330 1335 1340	4391
gcc aag tcc cca cac agc act gtg ccc gag cac cac cct cac ccc atc Ala Lys Ser Pro His Ser Thr Val Pro Glu His His Pro His Pro Ile 1345 1350 1355	4439
tcc ccc tat gag cac ttg ctc cgg ggc gtg act ggt gtg gac ctg tac Ser Pro Tyr Glu His Leu Leu Arg Gly Val Thr Gly Val Asp Leu Tyr 1360 1365 1370 1375	4487
cgt ggt cac atc cca ttg gcc ttt gac ccc acc tcc ata ccc cga ggg Arg Gly His Ile Pro Leu Ala Phe Asp Pro Thr Ser Ile Pro Arg Gly 1380 1385 1390	4535
atc cct ctg gaa gca gca gcc gca gcc tac tac ctg ccc cgg cac ttg Ile Pro Leu Glu Ala Ala Ala Ala Ala Tyr Tyr Leu Pro Arg His Leu 1395 1400 1405	4583
gcc ccc agc ccc acc tac cca cac ctg tac cca cct tac ctc atc cgc Ala Pro Ser Pro Thr Tyr Pro His Leu Tyr Pro Pro Tyr Leu Ile Arg 1410 1415 1420	4631
ggc tac cct gac acg gcg gcc ctg gag aac cgc cag acc atc atc aat Gly Tyr Pro Asp Thr Ala Ala Leu Glu Asn Arg Gln Thr Ile Ile Asn 1425 1430 1435	4679
gac tac atc acc tcg cag cag atg cac cac aac gct gcc tcc gcc atg Asp Tyr Ile Thr Ser Gln Gln Met His His Asn Ala Ala Ser Ala Met 1440 1445 1450 1455	4727
gcc cag cgt gct gac atg ctg agg ggt ctg tca ccg cga gag tcc tcg Ala Gln Arg Ala Asp Met Leu Arg Gly Leu Ser Pro Arg Glu Ser Ser 1460 1465 1470	4775

ctg	gcc	ctc	aat	tat	gcc	gct	ggc	cca	aga	ggc	att	atc	gac	ctg	tcc	4823
Leu	Ala	Leu	Asn	Tyr	Ala	Ala	Gly	Pro	Arg	Gly	Ile	Ile	Asp	Leu	Ser	
1475				1480				1485								
caa	gtg	cca	cac	ctg	ccc	gtg	ctg	gtg	cca	cca	acg	cca	ggc	acc	cct	4871
Gln	Val	Pro	His	Leu	Pro	Val	Leu	Val	Pro	Pro	Thr	Pro	Gly	Thr	Pro	
1490				1495				1500								
gcc	acc	gcc	atc	gac	cgc	ctt	gcc	tac	ctc	ccc	act	gcg	ccc	cca	ccc	4919
Ala	Thr	Ala	Ile	Asp	Arg	Leu	Ala	Tyr	Leu	Pro	Thr	Ala	Pro	Pro	Pro	
1505				1510				1515								
ttc	agc	agc	cgc	cac	agt	agc	tca	ccg	ctg	tcc	cca	gga	ggc	ccc	act	4967
Phe	Ser	Ser	Arg	His	Ser	Ser	Ser	Pro	Leu	Ser	Pro	Gly	Gly	Pro	Thr	
1520				1525				1530				1535				
cac	cta	gct	aaa	cca	act	gcc	aca	tct	tca	tcg	gag	cgg	gaa	cgg	gaa	5015
His	Leu	Ala	Lys	Pro	Thr	Ala	Thr	Ser	Ser	Ser	Glu	Arg	Glu	Arg	Glu	
1540				1545				1550								
cgt	gag	cgg	gaa	cga	gac	aag	tcc	atc	ctc	acg	tct	acc	act	aca	gtg	5063
Arg	Glu	Arg	Glu	Arg	Asp	Lys	Ser	Ile	Leu	Thr	Ser	Thr	Thr	Thr	Val	
1555				1560				1565								
gag	cat	gca	ccc	atc	tgg	aga	cct	ggc	acg	gag	cag	agc	agc	ggg	gct	5111
Glu	His	Ala	Pro	Ile	Trp	Arg	Pro	Gly	Thr	Glu	Gln	Ser	Ser	Gly	Ala	
1570				1575				1580								
ggg	ggc	agc	agc	cgc	ccc	gcc	tcc	cac	acc	cac	cag	cac	tcg	ccc	atc	5159
Gly	Gly	Ser	Ser	Arg	Pro	Ala	Ser	His	Thr	His	Gln	His	Ser	Pro	Ile	
1585				1590				1595								
tcc	ccc	cgg	acc	cag	gac	gcc	ttg	cag	cag	agg	ccc	agt	gtg	ctg	cac	5207
Ser	Pro	Arg	Thr	Gln	Asp	Ala	Leu	Gln	Gln	Arg	Pro	Ser	Val	Leu	His	
1600				1605				1610				1615				
aac	acg	agc	atg	aag	ggc	gtg	gtc	acc	tcc	gtg	gaa	ccc	ggc	acg	ccc	5255
Asn	Thr	Ser	Met	Lys	Gly	Val	Val	Thr	Ser	Val	Glu	Pro	Gly	Thr	Pro	
1620				1625				1630								
acg	gtc	ctg	agg	tgg	gcc	agg	tcc	acc	tcc	acc	tct	tcg	cct	gtc	cgc	5303
Thr	Val	Leu	Arg	Trp	Ala	Arg	Ser	Thr	Ser	Thr	Ser	Ser	Pro	Val	Arg	
1635				1640				1645								
cca	gct	gcc	aca	ttc	cca	cct	gcc	acc	cac	tgc	cca	ctt	ggc	ggc	acc	5351
Pro	Ala	Ala	Thr	Phe	Pro	Pro	Ala	Thr	His	Cys	Pro	Leu	Gly	Gly	Thr	
1650				1655				1660								
ctt	gaa	ggg	gtc	tac	cct	acc	ctc	atg	gag	ccc	gtc	ctg	tta	ccc	aag	5399
Leu	Glu	Gly	Val	Tyr	Pro	Thr	Leu	Met	Glu	Pro	Val	Leu	Leu	Pro	Lys	
1665				1670				1675								
gag	acc	tct	cgg	gtc	gcc	cgg	ccc	gag	cgg	gcc	cgg	gtg	gac	gct	ggc	5447
Glu	Thr	Ser	Arg	Val	Ala	Arg	Pro	Glu	Arg	Ala	Arg	Val	Asp	Ala	Gly	
1680				1685				1690				1695				
cat	gcc	ttt	ctt	acc	aaa	ccc	ccg	ggc	cgg	gag	ccc	gcc	tcc	tca	ccc	5495
His	Ala	Phe	Leu	Thr	Lys	Pro	Pro	Gly	Arg	Glu	Pro	Ala	Ser	Ser	Pro	
1700				1705				1710								

agc aag agc tcc gag ccc cga tcc cta gca ccc ccc agc tcc agc cac	5543
Ser Lys Ser Ser Glu Pro Arg Ser Leu Ala Pro Pro Ser Ser Ser His	
1715 1720 1725	
aca gcc atc gcc cgc acc cca gca aag aac ctt gca ccc cac cat gcc	5591
Thr Ala Ile Ala Arg Thr Pro Ala Lys Asn Leu Ala Pro His His Ala	
1730 1735 1740	
agt ccg gac ccg ccg gcg ccc acc tcg gcc tca gat ctg cac cga gaa	5639
Ser Pro Asp Pro Pro Ala Pro Thr Ser Ala Ser Asp Leu His Arg Glu	
1745 1750 1755	
aag act caa agt aaa ccc ttt tcc atc cag gaa ttg gaa ctc cgt tct	5687
Lys Thr Gln Ser Lys Pro Phe Ser Ile Gln Glu Leu Glu Leu Arg Ser	
1760 1765 1770 1775	
ctg ggt tac cac agt gga gct ggc tac agc ccc gat ggg gtg gag ccc	5735
Leu Gly Tyr His Ser Gly Ala Gly Tyr Ser Pro Asp Gly Val Glu Pro	
1780 1785 1790	
atc agc ccg gtg agc tcc ccc agc ctg acc cac gac aag ggg ctc tcc	5783
Ile Ser Pro Val Ser Ser Pro Ser Leu Thr His Asp Lys Gly Leu Ser	
1795 1800 1805	
aaa cct ctg gaa gag cta gag aag agc cac ttg gaa ggg gag ctg cgg	5831
Lys Pro Leu Glu Glu Leu Glu Lys Ser His Leu Glu Gly Glu Leu Arg	
1810 1815 1820	
cac aag cag cca ggc ccc atg aag ctc agc gcg gag gct gcc cat ctc	5879
His Lys Gln Pro Gly Pro Met Lys Leu Ser Ala Glu Ala Ala His Leu	
1825 1830 1835	
cca cat ctg cgg cca ctg ccc gag agc cag ccc tca tcc agc cca ctc	5927
Pro His Leu Arg Pro Leu Pro Glu Ser Gln Pro Ser Ser Ser Pro Leu	
1840 1845 1850 1855	
ctc cag act gcc cca ggc atc aaa ggt cac cag agg gtg gtc acc ctg	5975
Leu Gln Thr Ala Pro Gly Ile Lys Gly His Gln Arg Val Val Thr Leu	
1860 1865 1870	
gct cag cac atc agc gag gtc att acg cag gac tac acg cgc cac cac	6023
Ala Gln His Ile Ser Glu Val Ile Thr Gln Asp Tyr Thr Arg His His	
1875 1880 1885	
ccg cag cag ctc agt ggc ccc ctt ccc gcc cct ctc tac tcc ttt ccc	6071
Pro Gln Gln Leu Ser Gly Pro Leu Pro Ala Pro Leu Tyr Ser Phe Pro	
1890 1895 1900	
gga gcc agc tgc cct gtc ctg gat ctt cgc cgc cca ccc agt gac ctc	6119
Gly Ala Ser Cys Pro Val Leu Asp Leu Arg Arg Pro Pro Ser Asp Leu	
1905 1910 1915	
tac ctc cca ccc ccc gac cat ggc acc cca gcc cgg gga tcc ccc cac	6167
Tyr Leu Pro Pro Pro Asp His Gly Thr Pro Ala Arg Gly Ser Pro His	
1920 1925 1930 1935	
agt gaa ggg ggc aaa agg tcc cca gaa ccc agc aaa aca tcg gtc ctg	6215
Ser Glu Gly Gly Lys Arg Ser Pro Glu Pro Ser Lys Thr Ser Val Leu	
1940 1945 1950	

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ggc agc agc gag gat gcc att gag cct gtg tcc cca cca gag ggc atg Gly Ser Ser Glu Asp Ala Ile Glu Pro Val Ser Pro Pro Glu Gly Met 1955 1960 1965	6263
act gag cca gga cat gct cgg agc act gcg tac cca ctg ctg tat cga Thr Glu Pro Gly His Ala Arg Ser Thr Ala Tyr Pro Leu Leu Tyr Arg 1970 1975 1980	6311
gac ggg gaa cag ggc gag ccc agg atg ggt cta gag tct cca ggc aac Asp Gly Glu Gln Gly Glu Pro Arg Met Gly Leu Glu Ser Pro Gly Asn 1985 1990 1995	6359
acc agc cag ccg cca acc ttc ttc agt aag ctg act gag agc aac tcc Thr Ser Gln Pro Pro Thr Phe Phe Ser Lys Leu Thr Glu Ser Asn Ser 2000 2005 2010 2015	6407
gcc atg gtg aag tcg aag aag cag gag atc aac aag aaa ctc aac acc Ala Met Val Lys Ser Lys Lys Gln Glu Ile Asn Lys Lys Leu Asn Thr 2020 2025 2030	6455
cac aac cgg aac gag cca gaa tac aat att ggc cag cct ggg acg gaa His Asn Arg Asn Glu Pro Glu Tyr Asn Ile Gly Gln Pro Gly Thr Glu 2035 2040 2045	6503
atc ttc aac atg ccc gcc atc act gga gca ggc ctt atg acc tgt aga Ile Phe Asn Met Pro Ala Ile Thr Gly Ala Gly Leu Met Thr Cys Arg 2050 2055 2060	6551
agc cag gcg gtg caa gaa cac gcc agc acc aac atg ggg cta gag gcc Ser Gln Ala Val Gln Glu His Ala Ser Thr Asn Met Gly Leu Glu Ala 2065 2070 2075	6599
att att aga aag gca ctc atg ggt aaa tat gat cag tgg gaa gag ccc Ile Ile Arg Lys Ala Leu Met Gly Lys Tyr Asp Gln Trp Glu Glu Pro 2080 2085 2090 2095	6647
ccg ccg ctc ggc gcc aat gct ttt aac cct ctg aat gcc agc gcc agt Pro Pro Leu Gly Ala Asn Ala Phe Asn Pro Leu Asn Ala Ser Ala Ser 2100 2105 2110	6695
ctg ccc gct gct gct atg ccc ata acc act gct gac gga cgg agt gac Leu Pro Ala Ala Ala Met Pro Ile Thr Thr Ala Asp Gly Arg Ser Asp 2115 2120 2125	6743
cac gca ctc acc tcg cca ggt gga ggt ggg aaa gcc aag gtc tct ggc His Ala Leu Thr Ser Pro Gly Gly Gly Gly Lys Ala Lys Val Ser Gly 2130 2135 2140	6791
aga cct agc agc cga aaa gcc aag tcg cca gca cca ggc cta gcg tcc Arg Pro Ser Ser Arg Lys Ala Lys Ser Pro Ala Pro Gly Leu Ala Ser 2145 2150 2155	6839
gga gac cga ccc cct tct gtc tcc tca gta cac tca gag ggg gac tgc Gly Asp Arg Pro Pro Ser Val Ser Ser Val His Ser Glu Gly Asp Cys 2160 2165 2170 2175	6887
aat cgc cga aca cca ctc acc aac cgt gtg tgg gag gac cgg ccc tca Asn Arg Arg Thr Pro Leu Thr Asn Arg Val Trp Glu Asp Arg Pro Ser 2180 2185 2190	6935

tct gca ggg tcc acg	cca ttc ccc tac aac cct ttg att atg agg cta	6983
Ser Ala Gly Ser Thr Pro Phe Pro Tyr Asn Pro Leu Ile Met Arg Leu		
2195	2200 2205	
cag gca ggt gtc atg gcc tcc ccg ccc cca cct ggc ctt gcg gca ggc	7031	
Gln Ala Gly Val Met Ala Ser Pro Pro Pro Gly Leu Ala Ala Gly		
2210 2215 2220		
agc ggg ccc cta gct ggt ccc cac cac gcc tgg gat gag gag ccc aag	7079	
Ser Gly Pro Leu Ala Gly Pro His His Ala Trp Asp Glu Glu Pro Lys		
2225 2230 2235		
cca ctg ctg tgt tca cag tat gag aca ctc tcg gac agc gag tga	7124	
Pro Leu Leu Cys Ser Gln Tyr Glu Thr Leu Ser Asp Ser Glu *		
2240 2245 2250		
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545					550					555					560	
act	gag	gaa	aga	gag	caa	gcc	aca	ccc	cgg	ggg	cga	aag	act	gcc	aac	1968
Thr	Glu	Glu	Arg	Glu	Gln	Ala	Thr	Pro	Arg	Gly	Arg	Lys	Thr	Ala	Asn	
				565					570					575		
agt	cag	ggc	cgc	cgt	aag	ggc	cgg	atc	acc	agg	tcc	atg	aca	aac	gaa	2016
Ser	Gln	Gly	Arg	Arg	Lys	Gly	Arg	Ile	Thr	Arg	Ser	Met	Thr	Asn	Glu	
			580					585					590			
gct	gca	gct	gcc	agt	gct	gca										

610				615				620								
acc	tct	cga	tgg	aca	gaa	gaa	gaa	atg	gaa	gtt	gct	aaa	aaa	ggg	cta	2160
Thr	Ser	Arg	Trp	Thr	Glu	Glu	Glu	Met	Glu	Val	Ala	Lys	Lys	Gly	Leu	
625					630					635					640	
gta	gaa	cat	ggg	cgt	aac	tgg	gca	gca	att	gct	aaa	atg	gtg	gga	acg	2208
Val	Glu	His	Gly	Arg	Asn	Trp	Ala	Ala	Ile	Ala	Lys	Met	Val	Gly	Thr	
				645					650					655		
aaa	agt	gaa	gct	caa	tgt	aaa	aac	ttc	tat	ttt	aac	tat	aaa	agg	cga	2256
Lys	Ser	Glu	Ala	Gln	Cys	Lys	Asn	Phe	Tyr	Phe	Asn	Tyr	Lys	Arg	Arg	
			660					665					670			
cac	aat	ctt	gac	aac	ctc	tta	cag	cag	cat	aaa	cag	aaa	act	tca	cga	2304
His	Asn	Leu	Asp	Asn	Leu	Leu	Gln	Gln	His	Lys	Gln	Lys	Thr	Ser	Arg	
		675					680					685				
aaa	cct	cgt	gaa	gag	cga	gat	gtg	tct	caa	tgt	gaa	agt	gtc	gct	tcc	2352
Lys	Pro	Arg	Glu	Glu	Arg	Asp	Val	Ser	Gln	Cys	Glu	Ser	Val	Ala	Ser	
	690					695					700					
act	gtt	tct	gct	cag	gag	gat	gaa	gat	att	gaa	gcc	tcc	aat	gaa	gaa	2400
Thr	Val	Ser	Ala	Gln	Glu	Asp	Glu	Asp	Ile	Glu	Ala	Ser	Asn	Glu	Glu	
705				710					715						720	
gaa	aat	cca	gaa	gac	agc	gaa	gtt	gaa	gct	gtc	aag	ccc	agc	gag	gac	2448
Glu	Asn	Pro	Glu	Asp	Ser	Glu	Val	Glu	Ala	Val	Lys	Pro	Ser	Glu	Asp	
				725					730					735		
agt	cct	gaa	aat	gct	act	tct	cga	gga	aac	aca	gaa	cct	gcg	gtt	gag	2496
Ser	Pro	Glu	Asn	Ala	Thr	Ser	Arg	Gly	Asn	Thr	Glu	Pro	Ala	Val	Glu	
			740					745					750			
ctt	gag	ccc	acc	acg	gaa	act	gca	ccc	agt	aca	tct	ccc	tcc	tta	gca	2544
Leu	Glu	Pro	Thr	Thr	Glu	Thr	Ala	Pro	Ser	Thr	Ser	Pro	Ser	Leu	Ala	
		755					760					765				
gtt	cca	agt	aca	aaa	cca	gct	gaa	gat	gaa	agt	gtg	gag	acc	cag	gtg	2592
Val	Pro	Ser	Thr	Lys	Pro	Ala	Glu	Asp	Glu	Ser	Val	Glu	Thr	Gln	Val	
	770					775					780					
aat	gac	agc	atc	agt	gct	gag	aca	gca	gag	cag	atg	gat	gta	gat	cag	2640
Asn	Asp	Ser	Ile	Ser	Ala	Glu	Thr	Ala	Glu	Gln	Met	Asp	Val	Asp	Gln	
785					790					795					800	
cag	gag	cac	agt	gct	gaa	gag	ggg	tct	gtt	tgt	gat	ccc	cca	ccc	gct	2688
Gln	Glu	His	Ser	Ala	Glu	Glu	Gly	Ser	Val	Cys	Asp	Pro	Pro	Pro	Ala	
				805				810						815		
acc	aaa	gct	gac	tct	gtg	gac	gtt	gaa	gtg	agg	gtg	cca	gaa	aac	cat	2736
Thr	Lys	Ala	Asp	Ser	Val	Asp	Val	Glu								

850

855

860

caa ata aat gcc caa agg ccc gag ccc cag tca gac aat gat tcc agt	2880
Gln Ile Asn Ala Gln Arg Pro Glu Pro Gln Ser Asp Asn Asp Ser Ser	
865 870 875 880	
gcc acg tgc agc gct gat gag gat gtg gat gga gag cca gag agg cag	2928
Ala Thr Cys Ser Ala Asp Glu Asp Val Asp Gly Glu Pro Glu Arg Gln	
885 890 895	
aga atg ttt cct atg gac tca aag cct tca ctg tta aac ccc act gga	2976
Arg Met Phe Pro Met Asp Ser Lys Pro Ser Leu Leu Asn Pro Thr Gly	
900 905 910	
tct ata ctc gtc tca tct ccg tta aaa cca aat cca ctg gat ctg cca	3024
Ser Ile Leu Val Ser Ser Pro Leu Lys Pro Asn Pro Leu Asp Leu Pro	
915 920 925	
cag ctt cag cat cga gct gct gtt atc cca cca atg gta tcc tgc acc	3072
Gln Leu Gln His Arg Ala Ala Val Ile Pro Pro Met Val Ser Cys Thr	
930 935 940	
cca tgt aac ata cca att gga acc cca gtg agc ggc tat gct ctc tac	3120
Pro Cys Asn Ile Pro Ile Gly Thr Pro Val Ser Gly Tyr Ala Leu Tyr	
945 950 955 960	
cag cga cac att aaa gca atg cat gag tca gca ctc ctg gag gag cag	3168
Gln Arg His Ile Lys Ala Met His Glu Ser Ala Leu Leu Glu Glu Gln	
965 970 975	
cgg cag aga caa gaa cag ata gat ttg gaa tgt aga agt tct aca agt	3216
Arg Gln Arg Gln Glu Gln Ile Asp Leu Glu Cys Arg Ser Ser Thr Ser	
980 985 990	
cca tgt ggc aca tcc aag agt cca aac aga gag tgg gaa gtc ctt cag	3264
Pro Cys Gly Thr Ser Lys Ser Pro Asn Arg Glu Trp Glu Val Leu Gln	
995 1000 1005	
cct gct cca cat caa ttg ata act aat ctc cct gaa ggc gtt cgg ctt	3312
Pro Ala Pro His Gln Leu Ile Thr Asn Leu Pro Glu Gly Val Arg Leu	
1010 1015 1020	
ccg aca act cga cca acc agg cca ccg ccc cct ctc atc ccg tca tcc	3360
Pro Thr Thr Arg Pro Thr Arg Pro Pro Pro Pro Leu Ile Pro Ser Ser	
1025 1030 1035 1040	
aaa acc aca gtg gct tca gaa aaa cca tct ttt ata atg gga ggc tcc	3408
Lys Thr Thr Val Ala Ser Glu Lys Pro Ser Phe Ile Met Gly Gly Ser	
1045 1050 1055	
atc tca cag gga aca cca ggc act tat ttg act tct cat aat cag gct	3456
Ile Ser Gln Gly Thr Pro Gly Thr Tyr Leu Thr Ser His Asn Gln Ala	
1060 1065 1070	
tcc tac act caa gaa aca ccc aag ccg tca gta gga tct atc tct ctt	3504
Ser Tyr Thr Gln Glu Thr Pro Lys Pro Ser Val Gly Ser Ile Ser Leu	
1075 1080 1085	
gga ctg cca cgg caa cag gaa tct gcc aaa tca gct act ttg ccc tac	3552
Gly Leu Pro Arg Gln Gln Glu Ser Ala Lys Ser Ala Thr Leu Pro Tyr	

000100: 3522560



1090					1095					1100						
atc	aag	cag	gaa	gaa	ttt	tct	ccc	cga	agc	caa	aac	tca	caa	cct	gag	3600
Ile	Lys	Gln	Glu	Glu	Phe	Ser	Pro	Arg	Ser	Gln	Asn	Ser	Gln	Pro	Glu	
1105					1110					1115					1120	
ggg	ctg	ttg	gtc	agg	gcc	caa	cat	gaa	ggg	gta	gtc	aga	ggg	acc	gca	3648
Gly	Leu	Leu	Val	Arg	Ala	Gln	His	Glu	Gly	Val	Val	Arg	Gly	Thr	Ala	
				1125					1130					1135		
gga	gcc	ata	caa	gaa	gga	agt	ata	act	cgg	gga	act	cca	acc	agc	aaa	3696
Gly	Ala	Ile	Gln	Glu	Gly	Ser	Ile	Thr	Arg	Gly	Thr	Pro	Thr	Ser	Lys	
			1140					1145					1150			
att	tca	gtg	gag	agc	att	cca	tcc	cta	cgg	ggc	tct	atc	act	cag	ggc	3744
Ile	Ser	Val	Glu	Ser	Ile	Pro	Ser	Leu	Arg	Gly	Ser	Ile	Thr	Gln	Gly	
		1155					1160					1165				
acc	ccg	gct	ctg	ccc	cag	act	ggc	ata	cca	aca	gag	gct	ttg	gtg	aag	3792
Thr	Pro	Ala	Leu	Pro	Gln	Thr	Gly	Ile	Pro	Thr	Glu	Ala	Leu	Val	Lys	
	1170					1175					1180					
ggg	tcc	att	tcg	aga	atg	ccc	att	gaa	gac	agc	agt	cct	gag	aaa	ggc	3840
Gly	Ser	Ile	Ser	Arg	Met	Pro	Ile	Glu	Asp	Ser	Ser	Pro	Glu	Lys	Gly	
1185					1190					1195					1200	
aga	gag	gaa	gct	gca	tcc	aaa	ggc	cat	gtt	att	tat	gaa	ggc	aaa	agt	3888
Arg	Glu	Glu	Ala	Ala	Ser	Lys	Gly	His	Val	Ile	Tyr	Glu	Gly	Lys	Ser	
			1205						1210					1215		
gga	cat	atc	ttg	tca	tat	gat	aat	att	aag	aat	gcc	cga	gaa	ggg	act	3936
Gly	His	Ile	Leu	Ser	Tyr	Asp	Asn	Ile	Lys	Asn	Ala	Arg	Glu	Gly	Thr	
			1220					1225					1230			
agg	agt	cca	aga	aca	gct	cat	gaa	atc	agt	tta	aag	aga	agc	tat	gaa	3984
Arg	Ser	Pro	Arg	Thr	Ala	His	Glu	Ile	Ser	Leu	Lys	Arg	Ser	Tyr	Glu	
		1235					1240					1245				
tca	gtg	gaa	gga	aat	ata	aag	caa	ggg	atg	tca	atg	agg	gag	tct	cct	4032
Ser	Val	Glu	Gly	Asn	Ile	Lys	Gln	Gly	Met	Ser	Met	Arg	Glu	Ser	Pro	
	1250					1255					1260					
gta	tca	gca	ccg	tta	gag	ggg	ctg	ata	tgc	cga	gca	tta	ccc	agg	ggg	4080
Val	Ser	Ala	Pro	Leu	Glu	Gly	Leu	Ile	Cys	Arg	Ala	Leu	Pro	Arg	Gly	
1265					1270					1275					1280	
agt	cct	cat	tct	gac	ctc	aaa	gaa	agg	act	gta	ttg	tct	ggc	tcc	ata	4128
Ser	Pro	His	Ser	Asp	Leu	Lys	Glu	Arg	Thr	Val	Leu	Ser	Gly	Ser	Ile	
				1285					1290					1295		
atg	cag	ggg	aca	cca	aga	gca	aca	act	gaa	agc	ttt	gaa	gat	ggc	ctt	4176
Met	Gln	Gly	Thr	Pro	Arg											

1330			1335			1340										
aaa Lys 1345	gaa Glu	atg Met	ggg Gly	cgt Arg	tcc Ser	att Ile	cat His	gag Glu	att Ile	cca Pro	agg Arg	caa Gln	gat Asp	att Ile	tta Leu 1360	4320
			1350						1355							
act Thr	cag Gln	gaa Glu	agt Ser	cgg Arg	aaa Lys	act Thr	cca Pro	gaa Glu	gtg Val	gtc Val	cag Gln	agc Ser	aca Thr	cgg Arg	ccg Pro 1375	4368
			1365						1370							
ata Ile	att Ile	gag Glu	ggg Gly	tcc Ser	att Ile	tcc Ser	cag Gln	ggc Gly	aca Thr	cca Pro	ata Ile	aag Lys	ttt Phe	gac Asp	aac Asn 1390	4416
			1380						1385							
aac Asn	tca Ser	ggt Gly	caa Gln	tct Ser	gcc Ala	atc Ile	aaa Lys	cac His	aat Asn	gtc Val	aaa Lys	tcc Ser	tta Leu	atc Ile	acg Thr 1405	4464
			1395						1400							
ggg Gly	cct Pro	agc Ser	aaa Lys	cta Leu	tcc Ser	cgt Arg	gga Gly	atg Met	cct Pro	ccg Pro	ctg Leu	gaa Glu	att Ile	gtg Val	cca Pro 1420	4512
			1410						1415							
gag Glu	aac Asn	ata Ile	aaa Lys	gtg Val	gta Val	gaa Glu	cgg Arg	gga Gly	aaa Lys	tat Tyr	gag Glu	gat Asp	gtg Val	aaa Lys	gca Ala 1440	4560
			1425						1435							
ggc Gly	gag Glu	acc Thr	gtg Val	cgt Arg	tcc Ser	cgg Arg	cac His	acg Thr	tca Ser	gtg Val	gta Val	agc Ser	tct Ser	ggc Gly	ccc Pro 1455	4608
			1445						1450							
tcc Ser	gtt Val	ctt Leu	agg Arg	tcc Ser	aca Thr	ctg Leu	cat His	gaa Glu	gct Ala	ccc Pro	aaa Lys	gca Ala	caa Gln	ctg Leu	agc Ser 1470	4656
			1460						1465							
cct Pro	ggg Gly	att Ile	tat Tyr	gat Asp	gac Asp	acc Thr	agt Ser	gca Ala	cgg Arg	agg Arg	acc Thr	cct Pro	gtg Val	agt Ser	tat Tyr 1485	4704
			1475						1480							
caa Gln	aac Asn	acc Thr	atg Met	tcc Ser	aga Arg	ggc Gly	tca Ser	ccc Pro	atg Met	atg Met	aac Asn	aga Arg	act Thr	tct Ser	gat Asp 1500	4752
			1490						1495							
gtt Val	aca Thr	att Ile	cct Pro	cct Pro	aac Asn	aag Lys	tct Ser	acc Thr	aat Asn	cat His	gaa Glu	agg Arg	aaa Lys	tcg Ser	aca Thr 1520	4800
			1505						1510							
ctg Leu	acc Thr	cct Pro	acc Thr	cag Gln	agg Arg	gaa Glu	agt Ser	atc Ile	cca Pro	gcg Ala	aag Lys	tct Ser	cca Pro	gtg Val	cct Pro 1535	4848
			1525						1530							
ggg Gly	gtg Val	gac Asp	cct Pro	gtc Val	gtg Val	agc Ser	cac His	agt Ser	ccg Pro	ttt Phe	gat Asp	ccc Pro	cat His	cac His	aga Arg 1550	4896
			1540						1545							
ggc Gly	agc Ser	act Thr	gca Ala	ggc Gly	gag Glu	gtt Val	tat Tyr	tgg Trp	agc Ser	cac His	ctg Leu	ccc Pro	acg Thr	caa Gln	ttg Leu 1565	4944
			1555						1560							
gat Asp	cca Pro	gcc Ala	atg Met	cct Pro	ttt Phe	cac His	agg Arg	gct Ala	ttg Leu	gat Asp	cct Pro	gca Ala	gcg Ala	gct Ala	gct Ala 1592	4992

1570					1575					1580						
tac	ctg	ttt	cag	aga	cag	ctt	tca	cca	act	cca	ggg	tac	cca	agt	cag	5040
Tyr	Leu	Phe	Gln	Arg	Gln	Leu	Ser	Pro	Thr	Pro	Gly	Tyr	Pro	Ser	Gln	
1585					1590					1595					1600	
tat	cag	ctt	tac	gca	atg	gag	aac	aca	aga	cag	aca	atc	tta	aat	gat	5088
Tyr	Gln	Leu	Tyr	Ala	Met	Glu	Asn	Thr	Arg	Gln	Thr	Ile	Leu	Asn	Asp	
1605					1610					1615						
tac	att	acc	tca	caa	cag	atg	caa	gtg	aac	ttg	cgt	cca	gat	gtg	gcc	5136
Tyr	Ile	Thr	Ser	Gln	Gln	Met	Gln	Val	Asn	Leu	Arg	Pro	Asp	Val	Ala	
1620					1625					1630						
aga	gga	ctc	tcc	cca	aga	gag	cag	cca	ctg	ggg	ctc	cca	tac	cca	gca	5184
Arg	Gly	Leu	Ser	Pro	Arg	Glu	Gln	Pro	Leu	Gly	Leu	Pro	Tyr	Pro	Ala	
1635					1640					1645						
acg	aga	gga	atc	att	gac	ctg	acc	aat	atg	cct	cca	aca	att	tta	gtg	5232
Thr	Arg	Gly	Ile	Ile	Asp	Leu	Thr	Asn	Met	Pro	Pro	Thr	Ile	Leu	Val	
1650					1655					1660						
cct	cat	cca	ggg	gga	aca	agc	act	cct	ccc	atg	gac	aga	atc	act	tat	5280
Pro	His	Pro	Gly	Gly	Thr	Ser	Thr	Pro	Pro	Met	Asp	Arg	Ile	Thr	Tyr	
1665					1670					1675					1680	
att	cct	ggg	aca	cag	att	act	ttc	cct	ccc	agg	ccg	tac	aac	tct	gct	5328
Ile	Pro	Gly	Thr	Gln	Ile	Thr	Phe	Pro	Pro	Arg	Pro	Tyr	Asn	Ser	Ala	
1685					1690					1695						
tcc	atg	tct	cca	gga	cac	cca	aca	cac	ctt	gca	gct	gct	gca	agt	gct	5376
Ser	Met	Ser	Pro	Gly	His	Pro	Thr	His	Leu	Ala	Ala	Ala	Ala	Ser	Ala	
1700					1705					1710						
gag	agg	gaa	cgg	gaa	cgg	gag	cgg	gag	aag	gag	cgg	gag	cgg	gaa	cgg	5424
Glu	Arg	Glu	Arg	Glu	Arg	Glu	Arg	Glu	Lys	Glu	Arg	Glu	Arg	Glu	Arg	
1715					1720					1725						
att	gct	gca	gct	tcc	tcc	gac	ctc	tac	ctg	cgg	cca	ggc	tca	gaa	cag	5472
Ile	Ala	Ala	Ala	Ser	Ser	Asp	Leu	Tyr	Leu	Arg	Pro	Gly	Ser	Glu	Gln	
1730					1735					1740						
cct	ggc	cga	cct	ggc	agt	cat	gga	tat	gtt	cgc	tcc	cct	tcc	cct	tca	5520
Pro	Gly	Arg	Pro	Gly	Ser	His	Gly	Tyr	Val	Arg	Ser	Pro	Ser	Pro	Ser	
1745					1750					1755					1760	
gta	aga	act	cag	gag	acc	atg	ttg	caa	cag	aga	ccc	agt	gtt	ttc	caa	5568
Val	Arg	Thr	Gln	Glu	Thr	Met	Leu	Gln	Gln	Arg	Pro	Ser	Val	Phe	Gln	
1765					1770					1775						
gga	acc	aat	gga	acc	agt	gta	atc	aca	cct	ttg	gat	cca	act	gct	cag	5616
Gly	Thr	Asn	Gly	Thr	Ser	Val	Ile	Thr	Pro	Leu	Asp	Pro	Thr	Ala	Gln	
1780					1785					1790						
cta	cga	atc	atg	cca	ctg	cct	gct	ggg	ggc	cct	tca	ata	agc	caa	ggc	5664
Leu	Arg	Ile	Met	Pro	Leu	Pro	Ala	Gly	Gly	Pro	Ser	Ile	Ser	Gln	Gly	
1795					1800					1805						

1810					1815					1820										
gtg	gat	gct	gca	gct	tct	gca	ccc	cag	atg	gat	gtg	tcc	aaa	aca	aaa	5760				
Val	Asp	Ala	Ala	Ala	Ser	Ala	Pro	Gln	Met	Asp	Val	Ser	Lys	Thr	Lys					
1825					1830					1835					1840					
gag	agt	aag	cat	gaa	gct	gcc	agg	tta	gaa	gaa	aat	ttg	aga	agc	agg	5808				
Glu	Ser	Lys	His	Glu	Ala	Ala	Arg	Leu	Glu	Glu	Asn	Leu	Arg	Ser	Arg					
					1845					1850					1855					
tca	gca	gca	gtt	agt	gaa	cag	cag	cag	cta	gag	cag	aaa	acc	ctg	gag	5856				
Ser	Ala	Ala	Val	Ser	Glu	Gln	Gln	Gln	Leu	Glu	Gln	Lys	Thr	Leu	Glu					
					1860					1865					1870					
gtg	gag	aag	aga	tct	gtt	cag	tgt	tta	tac	act	tct	tca	gcc	ttt	cca	5904				
Val	Glu	Lys	Arg	Ser	Val	Gln	Cys	Leu	Tyr	Thr	Ser	Ser	Ala	Phe	Pro					
					1875					1880					1885					
agt	ggc	aag	ccc	cag	cct	cat	tct	tca	gta	gtt	tat	tct	gag	gct	ggg	5952				
Ser	Gly	Lys	Pro	Gln	Pro	His	Ser	Ser	Val	Val	Tyr	Ser	Glu	Ala	Gly					
					1890					1895					1900					
aaa	gat	aaa	ggg	cct	cct	cca	aaa	tcc	aga	tat	gag	gaa	gag	cta	agg	6000				
Lys	Asp	Lys	Gly	Pro	Pro	Pro	Lys	Ser	Arg	Tyr	Glu	Glu	Glu	Leu	Arg					
1905					1910					1915					1920					
acc	aga	ggg	aag	act	acc	att	act	gca	gct	aac	ttc	ata	gac	gtg	atc	6048				
Thr	Arg	Gly	Lys	Thr	Thr	Ile	Thr	Ala	Ala	Asn	Phe	Ile	Asp	Val	Ile					
					1925					1930					1935					
atc	acc	cgg	caa	att	gcc	tcg	gac	aag	gat	gcg	agg	gaa	cgt	ggc	tct	6096				
Ile	Thr	Arg	Gln	Ile	Ala	Ser	Asp	Lys	Asp	Ala	Arg	Glu	Arg	Gly	Ser					
					1940					1945					1950					
caa	agt	tca	gac	tct	tct	agt	agc	tta	tct	tct	cac	agg	tat	gaa	aca	6144				
Gln	Ser	Ser	Asp	Ser	Ser	Ser	Ser	Leu	Ser	Ser	His	Arg	Tyr	Glu	Thr					
					1955					1960					1965					
cct	agc	gat	gct	att	gag	gtg	ata	agt	cct	gcc	agc	tca	cct	gcg	cca	6192				
Pro	Ser	Asp	Ala	Ile	Glu	Val	Ile	Ser	Pro	Ala	Ser	Ser	Pro	Ala	Pro					
1970					1975					1980										
ccc	cag	gag	aaa	ctg	cag	acc	tat	cag	cca	gag	gtt	gtt	aag	gca	aat	6240				
Pro	Gln	Glu	Lys	Leu	Gln	Thr	Tyr	Gln	Pro	Glu	Val	Val	Lys	Ala	Asn					
1985					1990					1995					2000					
caa	gcg	gaa	aat	gat	cct	acc	aga	caa	tat	gaa	gga	cca	tta	cat	cac	6288				
Gln	Ala	Glu	Asn	Asp	Pro	Thr	Arg	Gln	Tyr	Glu	Gly	Pro	Leu	His	His					
					2005					2010					2015					
tat	cga	cca	cag	cag	gaa	tca	cca	tct	ccc	caa	caa	cag	ctg	ccc	cct	6336				
Tyr	Arg	Pro	Gln	Gln	Glu	Ser	Pro	Ser	Pro	Gln	Gln	Gln	Leu	Pro	Pro					
					2020					2025					2030					
tct	tca	cag	gca	gag	gga	atg	ggg	caa	gtg	ccc	agg	acc	cat	cgg	ctg	6384				
Ser	Ser	Gln	Ala	Glu	Gly	Met	Gly	Gln	Val	Pro	Arg	Thr	His	Arg	Leu					
2035					2040					2045										
atc	aca	ctt	gct	gat	cac	atc	tgt	caa	att	atc	aca	caa	gat	ttt	gct	6432				
Ile	Thr	Leu	Ala	Asp	His	Ile	Cys	Gln	Ile	Ile	Thr	Gln	Asp	Phe	Ala					

2050				2055				2060								
aga	aat	caa	gtt	tcc	tcg	cag	act	ccc	cag	cag	cct	cct	act	tct	aca	6480
Arg	Asn	Gln	Val	Ser	Ser	Gln	Thr	Pro	Gln	Gln	Pro	Pro	Thr	Ser	Thr	
2065				2070				2075				2080				
ttc	cag	aac	tca	cct	tct	gct	ttg	gta	tct	aca	cct	gtg	agg	act	aaa	6528
Phe	Gln	Asn	Ser	Pro	Ser	Ala	Leu	Val	Ser	Thr	Pro	Val	Arg	Thr	Lys	
				2085				2090				2095				
aca	tca	aac	cgt	tac	agc	cca	gaa	tcc	cag	gct	cag	tct	gtc	cat	cat	6576
Thr	Ser	Asn	Arg	Tyr	Ser	Pro	Glu	Ser	Gln	Ala	Gln	Ser	Val	His	His	
				2100				2105				2110				
caa	aga	cca	ggg	tca	agg	gtc	tct	cca	gaa	aat	ctt	gtg	gac	aaa	tcc	6624
Gln	Arg	Pro	Gly	Ser	Arg	Val	Ser	Pro	Glu	Asn	Leu	Val	Asp	Lys	Ser	
				2115				2120				2125				
agg	gga	agt	agg	cct	gga	aaa	tcc	cca	gag	agg	agt	cac	gtc	tct	tcc	6672
Arg	Gly	Ser	Arg	Pro	Gly	Lys	Ser	Pro	Glu	Arg	Ser	His	Val	Ser	Ser	
				2130				2135				2140				
gag	ccc	tac	gag	ccc	atc	tcc	cca	ccc	cag	gtt	ccg	gtt	gtg	cat	gag	6720
Glu	Pro	Tyr	Glu	Pro	Ile	Ser	Pro	Pro	Gln	Val	Pro	Val	Val	His	Glu	
2145				2150				2155				2160				
aaa	cag	gac	agc	ttg	ctg	ctc	ttg	tct	cag	agg	ggc	gca	gag	cct	gca	6768
Lys	Gln	Asp	Ser	Leu	Leu	Leu	Leu	Ser	Gln	Arg	Gly	Ala	Glu	Pro	Ala	
				2165				2170				2175				
gag	cag	agg	aat	gat	gcc	cgc	tca	cca	ggg	agt	ata	agc	tac	ttg	cct	6816
Glu	Gln	Arg	Asn	Asp	Ala	Arg	Ser	Pro	Gly	Ser	Ile	Ser	Tyr	Leu	Pro	
				2180				2185				2190				
tca	ttc	ttc	acc	aag	ctt	gaa	aat	aca	tca	ccc	atg	gtt	aaa	tca	aag	6864
Ser	Phe	Phe	Thr	Lys	Leu	Glu	Asn	Thr	Ser	Pro	Met	Val	Lys	Ser	Lys	
				2195				2200				2205				
aag	cag	gag	att	ttt	cgt	aag	ttg	aac	tcc	tct	ggt	gga	ggt	gac	tct	6912
Lys	Gln	Glu	Ile	Phe	Arg	Lys	Leu	Asn	Ser	Ser	Gly	Gly	Gly	Asp	Ser	
				2210				2215				2220				
gat	atg	gca	gct	gct	cag	cca	gga	act	gag	atc	ttt	aat	ctg	cca	gca	6960
Asp	Met	Ala	Ala	Ala	Gln	Pro	Gly	Thr	Glu	Ile	Phe	Asn	Leu	Pro	Ala	
2225				2230				2235				2240				
gtt	act	acg	tca	ggc	tca	gtt	agc	tct	aga	ggc	cat	tct	ttt	gct	gat	7008
Val	Thr	Thr	Ser	Gly	Ser	Val	Ser	Ser	Arg	Gly	His	Ser	Phe	Ala	Asp	
				2245				2250				2255				
cct	gcc	agt	aat	ctt	ggg	ctg	gaa	gac	att	atc	agg	aag	gct	ctc	atg	7056
Pro	Ala	Ser	Asn	Leu	Gly	Leu	Glu	Asp	Ile	Ile	Arg	Lys	Ala	Leu	Met	
				2260				2265				2270				
gga	agc	ttt	gat	gac	aaa	gtt	gag	gat	cat	gga	gtt	gtc	atg	tcc	cag	7104
Gly	Ser	Phe	Asp	Asp	Lys	Val	Glu	Asp	His	Gly	Val	Val	Met	Ser	Gln	
				2275</												

2300

<400> 11																
Met	Ser	Ser	Ser	Gly	Tyr	Pro	Pro	Asn	Gln	Gly	Ala	Phe	Ser	Thr	Glu	
1				5					10					15		
Gln	Ser	Arg	Tyr	Pro	Pro	His	Ser	Val	Gln	Tyr	Thr	Phe	Pro	Asn	Thr	
			20					25					30			
Arg	His	Gln	Gln	Glu	Phe	Ala	Val	Pro	Asp	Tyr	Arg	Ser	Ser	His	Leu	
		35					40					45				
Glu	Val	Ser	Gln	Ala	Ser	Gln	Leu	Leu	Gln	Gln	Gln	Gln	Gln	Gln	Gln	
	50					55					60					
Leu	Arg	Arg	Arg	Pro	Ser	Leu	Leu	Ser	Glu	Phe	His	Pro	Gly	Ser	Asp	

65	Arg	Pro	Gln	Glu	Arg	Arg	Thr	Ser	Tyr	Glu	Pro	Phe	His	Pro	Gly	Pro
					85					90					95	
Ser	Pro	Val	Asp	His	Asp	Ser	Leu	Glu	Ser	Lys	Arg	Pro	Arg	Leu	Glu	
			100					105					110			
Gln	Val	Ser	Asp	Ser	His	Phe	Gln	Arg	Val	Ser	Ala	Ala	Val	Leu	Pro	
			115				120					125				
Leu	Val	His	Pro	Leu	Pro	Glu	Gly	Leu	Arg	Ala	Ser	Ala	Asp	Ala	Lys	
			130			135				140						
Lys	Asp	Pro	Ala	Phe	Gly	Gly	Lys	His	Glu	Ala	Pro	Ser	Ser	Pro	Ile	
145					150					155					160	
Ser	Gly	Gln	Pro	Cys	Gly	Asp	Asp	Gln	Asn	Ala	Ser	Pro	Ser	Lys	Leu	
				165				170						175		
Ser	Lys	Glu	Glu	Leu	Ile	Gln	Ser	Met	Asp	Arg	Val	Asp	Arg	Glu	Ile	
			180					185					190			
Ala	Lys	Val	Glu	Gln	Gln	Ile	Leu	Lys	Leu	Lys	Lys	Lys	Gln	Gln	Gln	
			195				200					205				
Leu	Glu	Glu	Glu	Ala	Ala	Lys	Pro	Pro	Glu	Pro	Glu	Lys	Pro	Val	Ser	
			210			215					220					
Pro	Pro	Pro	Val	Glu	Gln	Lys	His	Arg	Ser	Ile	Val	Gln	Ile	Ile	Tyr	
225					230					235					240	
Asp	Glu	Asn	Arg	Lys	Lys	Ala	Glu	Glu	Ala	His	Lys	Ile	Phe	Glu	Gly	
				245					250					255		
Leu	Gly	Pro	Lys	Val	Glu	Leu	Pro	Leu	Tyr	Asn	Gln	Pro	Ser	Asp	Thr	
			260					265					270			
Lys	Val	Tyr	His	Glu	Asn	Ile	Lys	Thr	Asn	Gln	Val	Met	Arg	Lys	Lys	
			275					280					285			
Leu	Ile	Leu	Phe	Phe	Lys	Arg	Arg	Asn	His	Ala	Arg	Lys	Gln	Arg	Glu	
			290			295				300						
Gln	Lys	Ile	Cys	Gln	Arg	Tyr	Asp	Gln	Leu	Met	Glu	Ala	Trp	Glu	Lys	
305				310					315						320	
Lys	Val	Asp	Arg	Ile	Glu	Asn	Asn	Pro	Arg	Arg	Lys	Ala	Lys	Glu	Ser	
				325				330						335		
Lys	Thr	Arg	Glu	Tyr	Tyr	Glu	Lys	Gln	Phe	Pro	Glu	Ile	Arg	Lys	Gln	
			340					345					350			
Arg	Glu	Gln	Gln	Glu	Arg	Phe	Gln	Arg	Val	Gly	Gln	Arg	Gly	Ala	Gly	
			355				360						365			
Leu	Ser	Ala	Thr	Ile	Ala	Arg	Ser	Glu	His	Glu	Ile	Ser	Glu	Ile	Ile	
			370			375				380						
Asp	Gly	Leu	Ser	Glu	Gln	Asn	Asn	Glu	Lys	Gln	Met	Arg	Gln	Leu		
385				390					395					400		
Ser	Val	Ile	Pro	Pro	Met	Met	Phe	Asp	Ala	Glu	Gln	Arg	Arg	Val	Lys	
				405				410						415		
Phe	Ile	Asn	Met	Asn	Gly	Leu	Met	Glu	Asp	Pro	Met	Lys	Val	Tyr	Lys	
			420					425					430			
Asp	Arg	Gln	Phe	Met	Asn	Val	Trp	Thr	Asp	His	Glu	Lys	Glu	Ile	Phe	
			435				440					445				
Lys	Asp	Lys	Phe	Ile	Gln	His	Pro	Lys	Asn	Phe	Gly	Leu	Ile	Ala	Ser	
			450			455				460						
Tyr	Leu	Glu	Arg	Lys	Ser	Val	Pro	Asp	Cys	Val	Leu	Tyr	Tyr	Tyr	Leu	
465					470				475						480	
Thr	Lys	Lys	Asn	Glu	Asn	Tyr	Lys	Ala	Leu	Val	Arg	Arg	Asn	Tyr	Gly	
			485					490						495		
Lys	Arg	Arg	Gly	Arg	Asn	Gln	Gln	Ile	Ala	Arg	Pro	Ser	Gln	Glu	Glu	
			500				505						510			
Lys	Val	Glu	Glu	Lys	Glu	Glu	Asp	Lys	Ala	Glu	Lys	Thr	Glu	Lys	Lys	
			515				520					525				
Glu	Glu	Glu	Lys	Lys	Asp	Glu	Glu	Glu	Lys	Asp	Glu	Lys	Glu	Asp	Ser	
			530			535				540						
Lys	Glu	Asn	Thr	Lys	Glu	Lys	Asp	Lys	Ile	Asp	Gly	Thr	Ala	Glu	Glu	

545					550								560			
Thr	Glu	Glu	Arg	Glu	Gln	Ala	Thr	Pro	Arg	Gly	Arg	Lys	Thr	Ala	Asn	
				565					570					575		
Ser	Gln	Gly	Arg	Arg	Lys	Gly	Arg	Ile	Thr	Arg	Ser	Met	Thr	Asn	Glu	
			580					585					590			
Ala	Ala	Ala	Ala	Ser	Ala	Ala	Ala	Ala	Ala	Ala	Thr	Glu	Glu	Pro	Pro	
			595				600					605				
Pro	Pro	Leu	Pro	Pro	Pro	Pro	Glu	Pro	Ile	Ser	Thr	Glu	Pro	Val	Glu	
		610				615					620					
Thr	Ser	Arg	Trp	Thr	Glu	Glu	Glu	Met	Glu	Val	Ala	Lys	Lys	Gly	Leu	
625					630					635				640		
Val	Glu	His	Gly	Arg	Asn	Trp	Ala	Ala	Ile	Ala	Lys	Met	Val	Gly	Thr	
				645					650					655		
Lys	Ser	Glu	Ala	Gln	Cys	Lys	Asn	Phe	Tyr	Phe	Asn	Tyr	Lys	Arg	Arg	
			660					665					670			
His	Asn	Leu	Asp	Asn	Leu	Leu	Gln	Gln	His	Lys	Gln	Lys	Thr	Ser	Arg	
			675				680					685				
Lys	Pro	Arg	Glu	Glu	Arg	Asp	Val	Ser	Gln	Cys	Glu	Ser	Val	Ala	Ser	
			690			695					700					
Thr	Val	Ser	Ala	Gln	Glu	Asp	Glu	Asp	Ile	Glu	Ala	Ser	Asn	Glu	Glu	
705					710					715				720		
Glu	Asn	Pro	Glu	Asp	Ser	Glu	Val	Glu	Ala	Val	Lys	Pro	Ser	Glu	Asp	
				725					730					735		
Ser	Pro	Glu	Asn	Ala	Thr	Ser	Arg	Gly	Asn	Thr	Glu	Pro	Ala	Val	Glu	
			740					745					750			
Leu	Glu	Pro	Thr	Thr	Glu	Thr	Ala	Pro	Ser	Thr	Ser	Pro	Ser	Leu	Ala	
			755				760					765				
Val	Pro	Ser	Thr	Lys	Pro	Ala	Glu	Asp	Glu	Ser	Val	Glu	Thr	Gln	Val	
			770			775					780					
Asn	Asp	Ser	Ile	Ser	Ala	Glu	Thr	Ala	Glu	Gln	Met	Asp	Val	Asp	Gln	
785					790					795				800		
Gln	Glu	His	Ser	Ala	Glu	Glu	Gly	Ser	Val	Cys	Asp	Pro	Pro	Pro	Ala	
				805					810					815		
Thr	Lys	Ala	Asp	Ser	Val	Asp	Val	Glu	Val	Arg	Val	Pro	Glu	Asn	His	
			820					825					830			
Ala	Ser	Lys	Val	Glu	Gly	Asp	Asn	Thr	Lys	Glu	Arg	Asp	Leu	Asp	Arg	
			835				840					845				
Ala	Ser	Glu	Lys	Val	Glu	Pro	Arg	Asp	Glu	Asp	Leu	Val	Val	Ala	Gln	
			850			855					860					
Gln	Ile	Asn	Ala	Gln	Arg	Pro	Glu	Pro	Gln	Ser	Asp	Asn	Asp	Ser	Ser	
865					870					875				880		
Ala	Thr	Cys	Ser	Ala	Asp	Glu	Asp	Val	Asp	Gly	Glu	Pro	Glu	Arg	Gln	
				885					890					895		
Arg	Met	Phe	Pro	Met	Asp	Ser	Lys	Pro	Ser	Leu	Leu	Asn	Pro	Thr	Gly	
			900					905								



1025						1030						1035						1040
Lys	Thr	Thr	Val	Ala	Ser	Glu	Lys	Pro	Ser	Phe	Ile	Met	Gly	Gly	Ser			
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Ile	Ser	Gln	Gly	Thr	Pro	Gly	Thr	Tyr	Leu	Thr	Ser	His	Asn	Gln	Ala			
				1060					1065								1070	
Ser	Tyr	Thr	Gln	Glu	Thr	Pro	Lys	Pro	Ser	Val	Gly	Ser	Ile	Ser	Leu			
				1075					1080								1085	
Gly	Leu	Pro	Arg	Gln	Gln	Glu	Ser	Ala	Lys	Ser	Ala	Thr	Leu	Pro	Tyr			
				1090					1095								1100	
Ile	Lys	Gln	Glu	Glu	Phe	Ser	Pro	Arg	Ser	Gln	Asn	Ser	Gln	Pro	Glu			
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Gly	Leu	Leu	Val	Arg	Ala	Gln	His	Glu	Gly	Val	Val	Arg	Gly	Thr	Ala			
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Gly	Ala	Ile	Gln	Glu	Gly	Ser	Ile	Thr	Arg	Gly	Thr	Pro	Thr	Ser	Lys			
				1140				1145								1150		
Ile	Ser	Val	Glu	Ser	Ile	Pro	Ser	Leu	Arg	Gly	Ser	Ile	Thr	Gln	Gly			
				1155				1160								1165		
Thr	Pro	Ala	Leu	Pro	Gln	Thr	Gly	Ile	Pro	Thr	Glu	Ala	Leu	Val	Lys			
				1170				1175								1180		
Gly	Ser	Ile	Ser	Arg	Met	Pro	Ile	Glu	Asp	Ser	Ser	Pro	Glu	Lys	Gly			
1185					1190				1195								1200	
Arg	Glu	Glu	Ala	Ala	Ser	Lys	Gly	His	Val	Ile	Tyr	Glu	Gly	Lys	Ser			
				1205				1210								1215		
Gly	His	Ile	Leu	Ser	Tyr	Asp	Asn	Ile	Lys	Asn	Ala	Arg	Glu	Gly	Thr			
				1220				1225								1230		
Arg	Ser	Pro	Arg	Thr	Ala	His	Glu	Ile	Ser	Leu	Lys	Arg	Ser	Tyr	Glu			
				1235				1240								1245		
Ser	Val	Glu	Gly	Asn	Ile	Lys	Gln	Gly	Met	Ser	Met	Arg	Glu	Ser	Pro			
				1250				1255								1260		
Val	Ser	Ala	Pro	Leu	Glu	Gly	Leu	Ile	Cys	Arg	Ala	Leu	Pro	Arg	Gly			
1265					1270				1275								1280	
Ser	Pro	His	Ser	Asp	Leu	Lys	Glu	Arg	Thr	Val	Leu	Ser	Gly	Ser	Ile			
				1285				1290								1295		
Met	Gln	Gly	Thr	Pro	Arg	Ala	Thr	Thr	Glu	Ser	Phe	Glu	Asp	Gly	Leu			
				1300				1305								1310		
Lys	Tyr	Pro	Lys	Gln	Ile	Lys	Arg	Glu	Ser	Pro	Pro	Ile	Arg	Ala	Phe			
				1315				1320								1325		
Glu	Gly	Ala	Ile	Thr	Lys	Gly	Lys	Pro	Tyr	Asp	Gly	Ile	Thr	Thr	Ile			
				1330				1335								1340		
Lys	Glu	Met	Gly	Arg	Ser	Ile	His	Glu	Ile	Pro	Arg	Gln	Asp	Ile	Leu			
1345					1350				1355								1360	
Thr	Gln	Glu	Ser	Arg	Lys	Thr	Pro	Glu	Val	Val	Gln	Ser	Thr	Arg	Pro			
				1365				1370								1375		
Ile	Ile	Glu	Gly	Ser	Ile	Ser	Gln	Gly	Thr	Pro	Ile	Lys	Phe	Asp	Asn			
				1380				1385								1390		
Asn	Ser	Gly	Gln	Ser	Ala	Ile	Lys	His	Asn	Val	Lys	Ser	Leu	Ile	Thr			
				1395				1400								1405		
Gly	Pro	Ser	Lys	Leu	Ser	Arg	Gly	Met	Pro	Pro	Leu	Glu	Ile	Val	Pro			
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Glu	Asn	Ile	Lys	Val	Val	Glu	Arg	Gly	Lys	Tyr	Glu	Asp	Val	Lys	Ala			
1425					1430				1435								1440	
Gly	Glu	Thr	Val	Arg	Ser													

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Leu Thr Pro Thr Gln Arg Glu Ser Ile Pro Ala Lys Ser Pro Val Pro			
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Gly Val Asp Pro Val Val Ser His Ser Pro Phe Asp Pro His His Arg			
1540	1545	1550	
Gly Ser Thr Ala Gly Glu Val Tyr Trp Ser His Leu Pro Thr Gln Leu			
1555	1560	1565	
Asp Pro Ala Met Pro Phe His Arg Ala Leu Asp Pro Ala Ala Ala Ala			
1570	1575	1580	
Tyr Leu Phe Gln Arg Gln Leu Ser Pro Thr Pro Gly Tyr Pro Ser Gln			
1585	1590	1595	1600
Tyr Gln Leu Tyr Ala Met Glu Asn Thr Arg Gln Thr Ile Leu Asn Asp			
1605	1610	1615	
Tyr Ile Thr Ser Gln Gln Met Gln Val Asn Leu Arg Pro Asp Val Ala			
1620	1625	1630	
Arg Gly Leu Ser Pro Arg Glu Gln Pro Leu Gly Leu Pro Tyr Pro Ala			
1635	1640	1645	
Thr Arg Gly Ile Ile Asp Leu Thr Asn Met Pro Pro Thr Ile Leu Val			
1650	1655	1660	
Pro His Pro Gly Gly Thr Ser Thr Pro Pro Met Asp Arg Ile Thr Tyr			
1665	1670	1675	1680
Ile Pro Gly Thr Gln Ile Thr Phe Pro Pro Arg Pro Tyr Asn Ser Ala			
1685	1690	1695	
Ser Met Ser Pro Gly His Pro Thr His Leu Ala Ala Ala Ala Ser Ala			
1700	1705	1710	
Glu Arg Glu Arg Glu Arg Glu Arg Glu Lys Glu Arg Glu Arg Glu Arg			
1715	1720	1725	
Ile Ala Ala Ala Ser Ser Asp Leu Tyr Leu Arg Pro Gly Ser Glu Gln			
1730	1735	1740	
Pro Gly Arg Pro Gly Ser His Gly Tyr Val Arg Ser Pro Ser Pro Ser			
1745	1750	1755	1760
Val Arg Thr Gln Glu Thr Met Leu Gln Gln Arg Pro Ser Val Phe Gln			
1765	1770	1775	
Gly Thr Asn Gly Thr Ser Val Ile Thr Pro Leu Asp Pro Thr Ala Gln			
1780	1785	1790	
Leu Arg Ile Met Pro Leu Pro Ala Gly Gly Pro Ser Ile Ser Gln Gly			
1795	1800	1805	
Leu Pro Ala Ser Arg Tyr Asn Thr Ala Ala Asp Ala Leu Ala Ala Leu			
1810	1815	1820	
Val Asp Ala Ala Ala Ser Ala Pro Gln Met Asp Val Ser Lys Thr Lys			
1825	1830	1835	1840
Glu Ser Lys His Glu Ala Ala Arg Leu Glu Glu Asn Leu Arg Ser Arg			
1845	1850	1855	
Ser Ala Ala Val Ser Glu Gln Gln Gln Leu Glu Gln Lys Thr Leu Glu			
1860	1865	1870	
Val Glu Lys Arg Ser Val Gln Cys Leu Tyr Thr Ser Ser Ala Phe Pro			
1875	1880	1885	
Ser Gly Lys Pro Gln Pro His Ser Ser Val Val Tyr Ser Glu Ala Gly			
1890	1895	1900	
Lys Asp Lys Gly Pro Pro Pro Lys Ser Arg Tyr Glu Glu Glu Leu Arg			
1905	1910	1915	1920
Thr Arg Gly Lys Thr Thr Ile Thr Ala Ala Asn Phe Ile Asp Val Ile			
1925	1930	1935	
Ile Thr Arg Gln Ile Ala Ser Asp Lys Asp Ala Arg Glu Arg Gly Ser			
1940	1945	1950	
Gln Ser Ser Asp Ser Ser Ser Ser Leu Ser Ser His Arg Tyr Glu Thr			
1955	1960	1965	
Pro Ser Asp Ala Ile Glu Val Ile Ser Pro Ala Ser Ser Pro Ala Pro			
1970	1975	1980	
Pro Gln Glu Lys Leu Gln Thr Tyr Gln Pro Glu Val Val Lys Ala Asn			

000400 000000

1985				1990				1995				2000			
Gln	Ala	Glu	Asn	Asp	Pro	Thr	Arg	Gln	Tyr	Glu	Gly	Pro	Leu	His	His
2005				2010				2015							
Tyr	Arg	Pro	Gln	Gln	Glu	Ser	Pro	Ser	Pro	Gln	Gln	Gln	Leu	Pro	Pro
2020				2025				2030							
Ser	Ser	Gln	Ala	Glu	Gly	Met	Gly	Gln	Val	Pro	Arg	Thr	His	Arg	Leu
2035				2040				2045							
Ile	Thr	Leu	Ala	Asp	His	Ile	Cys	Gln	Ile	Ile	Thr	Gln	Asp	Phe	Ala
2050				2055				2060							
Arg	Asn	Gln	Val	Ser	Ser	Gln	Thr	Pro	Gln	Gln	Pro	Pro	Thr	Ser	Thr
2065				2070				2075				2080			
Phe	Gln	Asn	Ser	Pro	Ser	Ala	Leu	Val	Ser	Thr	Pro	Val	Arg	Thr	Lys
2085				2090				2095							
Thr	Ser	Asn	Arg	Tyr	Ser	Pro	Glu	Ser	Gln	Ala	Gln	Ser	Val	His	His
2100				2105				2110							
Gln	Arg	Pro	Gly	Ser	Arg	Val	Ser	Pro	Glu	Asn	Leu	Val	Asp	Lys	Ser
2115				2120				2125							
Arg	Gly	Ser	Arg	Pro	Gly	Lys	Ser	Pro	Glu	Arg	Ser	His	Val	Ser	Ser
2130				2135				2140							
Glu	Pro	Tyr	Glu	Pro	Ile	Ser	Pro	Pro	Gln	Val	Pro	Val	Val	His	Glu
2145				2150				2155				2160			
Lys	Gln	Asp	Ser	Leu	Leu	Leu	Leu	Ser	Gln	Arg	Gly	Ala	Glu	Pro	Ala
2165				2170				2175							
Glu	Gln	Arg	Asn	Asp	Ala	Arg	Ser	Pro	Gly	Ser	Ile	Ser	Tyr	Leu	Pro
2180				2185				2190							
Ser	Phe	Phe	Thr	Lys	Leu	Glu	Asn	Thr	Ser	Pro	Met	Val	Lys	Ser	Lys
2195				2200				2205							
Lys	Gln	Glu	Ile	Phe	Arg	Lys	Leu	Asn	Ser	Ser	Gly	Gly	Gly	Asp	Ser
2210				2215				2220							
Asp	Met	Ala	Ala	Ala	Gln	Pro	Gly	Thr	Glu	Ile	Phe	Asn	Leu	Pro	Ala
2225				2230				2235				2240			
Val	Thr	Thr	Ser	Gly	Ser	Val	Ser	Ser	Arg	Gly	His	Ser	Phe	Ala	Asp
2245				2250				2255							
Pro	Ala	Ser	Asn	Leu	Gly	Leu	Glu	Asp	Ile	Ile	Arg	Lys	Ala	Leu	Met
2260				2265				2270							
Gly	Ser	Phe	Asp	Asp	Lys	Val	Glu	Asp	His	Gly	Val	Val	Met	Ser	Gln
2275				2280				2285							
Pro	Met	Gly	Val	Val	Pro	Gly	Thr	Ala	Asn	Thr	Ser	Val	Val	Thr	Ser
2290				2295				2300							
Gly	Glu	Thr	Arg	Arg	Glu	Glu	Gly	Asp	Pro	Ser	Pro	His	Ser	Gly	Gly
2305				2310				2315				2320			
Val	Cys	Lys	Pro	Lys	Leu	Ile	Ser	Lys	Ser	Asn	Ser	Arg	Lys	Ser	Lys
2325				2330				2335							
Ser	Pro	Ile	Pro	Gly	Gln	Gly	Tyr	Leu	Gly	Thr	Glu	Arg	Pro	Ser	Ser
2340				2345				2350							
Val	Ser	Ser	Val	His	Ser	Glu	Gly	Asp	Tyr	His	Arg	Gln	Thr	Pro	Gly
2355				2360				2365							
Trp	Ala	Trp	Glu	Asp	Arg	Pro	Ser	Ser	Thr	Gly	Ser	Thr	Gln	Phe	Pro
2370				2375				2380							
Tyr	Asn	Pro	Leu	Thr	Met	Arg	Met	Leu	Ser	S					